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 CUSTOMER Brownsville Steel City LLC

# INSPECTION CERTIFICATE

(EN 10204:2004 3.1)

**ST&H CORPORATION**  
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| 발주번호<br>P/O NO.                                |                      |                                     | 원재료<br>RAW MATERIAL          |      |      |       |                                |      |      |      |                |      | 성적서번호<br>CERTIFICATE NO |                         |            |           |           |                 |                   |                  |                |                          |      |
|--|----------------------|-------------------------------------|------------------------------|------|------|-------|--------------------------------|------|------|------|----------------|------|-------------------------|-------------------------|------------|-----------|-----------|-----------------|-------------------|------------------|----------------|--------------------------|------|
| BSC 2010-222 (PSJ5724)                         |                      |                                     | MADE FROM STEEL PLATE        |      |      |       |                                |      |      |      |                |      | QA100724-02             |                         |            |           |           |                 |                   |                  |                |                          |      |
| 재료규격<br>Spec. for Material                     |                      |                                     | 검사규격<br>Spec. for Inspection |      |      |       | 외관및치수검사<br>Surface & Dimension |      |      |      | 비파괴검사<br>N.D.E |      |                         | 열처리<br>HEAT TREATMENT   |            |           |           |                 |                   |                  |                |                          |      |
| ASTM A234-05/ASME SA234-05 WPB<br>NACE MR-0175 |                      |                                     | ASME B16.9                   |      |      |       | GOOD                           |      |      |      | MT:GOOD        |      |                         | NORMALIZED (850℃X0.5HR) |            |           |           |                 |                   |                  |                |                          |      |
| STD  | 제품번호<br>STAMP<br>NO. | 화 학 성 분<br>CHEMICAL COMPOSITION (%) |                              |      |      |       |                                |      |      |      |                |      |                         | 인 장 시 험<br>Tensile Test |            |           |           | 굴곡시험<br>Bending | 평판시험<br>Flattenin | 경도시험<br>Hardness | 충격시험<br>Impact | 수압시험<br>Hydrost-<br>atic | C.E  |
|  |                      | C                                   | Si                           | Mn   | P    | S     | Cr                             | Mo   | Ni   | Cu   | V              | Nb   | N                       | Y-P<br>MPA              | T-S<br>MPA | EL<br>(%) | RA<br>(%) | Test<br>( )     | Test              | Test(HB)         | Test           | Test                     |      |
| SPEC   | 수량<br>Q'TY           | MIN                                 | 0.10                         | 0.29 |      |       |                                |      |      |      |                |      |                         | 240                     | 415        | 22        |           |                 |                   |                  |                |                          |      |
|  | MAX                  | 0.30                                |                              | 1.06 | 0.05 | 0.058 | 0.40                           | 0.15 | 0.40 | 0.40 | 0.08           |      |                         |                         | 655        |           |           |                 |                   |                  | 197            |                          |      |
| CAP STD  |                      |                                     | 0.19                         | 0.17 | 0.57 | 0.014 | 0.021                          | 0.01 | 0.01 | 0.01 | 0.01           | 0.01 |                         | 350                     | 475        | 34        |           |                 |                   |                  | <197           |                          | 0.29 |
| 1"   | 5                    | 0401                                |                              |      |      |       |                                |      |      |      |                |      |                         |                         |            |           |           |                 |                   |                  |                |                          |      |
| CAP STD  |                      |                                     | 0.16                         | 0.16 | 0.41 | 0.021 | 0.038                          | 0.01 | 0.01 | 0.01 | 0.01           | 0.01 |                         | 290                     | 440        | 31        |           |                 |                   |                  | <197           |                          | 0.24 |
| 1 1/2"   | 10                   | 42005                               |                              |      |      |       |                                |      |      |      |                |      |                         |                         |            |           |           |                 |                   |                  |                |                          |      |
| CAP STD  |                      |                                     | 0.15                         | 0.16 | 0.38 | 0.015 | 0.025                          | 0.01 | 0.01 | 0.01 | 0.01           | 0.01 |                         | 295                     | 430        | 34        |           |                 |                   |                  | <197           |                          | 0.22 |
| 2"   | 5                    | 42006                               |                              |      |      |       |                                |      |      |      |                |      |                         |                         |            |           |           |                 |                   |                  |                |                          |      |
| CAP STD  |                      |                                     | 0.18                         | 0.17 | 0.56 | 0.014 | 0.02                           | 0.01 | 0.01 | 0.01 | 0.01           | 0.01 |                         | 350                     | 475        | 35        |           |                 |                   |                  | <197           |                          | 0.28 |
| 3"   | 5                    | 0402                                |                              |      |      |       |                                |      |      |      |                |      |                         |                         |            |           |           |                 |                   |                  |                |                          |      |
| CAP STD  |                      |                                     | 0.16                         | 0.17 | 0.53 | 0.015 | 0.025                          | 0.01 | 0.01 | 0.01 | 0.01           | 0.01 |                         | 300                     | 470        | 35        |           |                 |                   |                  | <197           |                          | 0.26 |
| 4"   | 10                   | 0403                                |                              |      |      |       |                                |      |      |      |                |      |                         |                         |            |           |           |                 |                   |                  |                |                          |      |

We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.

1MPa = 145.037 psi  
 1MPa = 0.145037 ksi  
 1psi = 0.00689 MPa  
 1ksi = 6.89476 MPa

품질보증부  
 QUALITY ASSURANCE DEP'T

(株) 釜山 카프링  
 釜山 佐發

QUALITY INSPECTED AND SUPPLY BY ST&H CORP  
 MANUFACTURED BY PUSAN COUPLING CO.LTD

C.E.=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

B.J. KIM / Q.A -GENERAL MANAGER

양식번호 : QMS-8102-11

PUSAN COUPLING CO.,LTD